REMARKS

Claims 1-32 are pending in the application. Claims 1-32 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable in view of Bergsten (U.S. Patent No. 6,360,306), DuLac (U.S. Patent No. 5,550,986), Kern et al. (U.S. Patent No. 5,870,537), Wilson (U.S. Patent No. 6,718,347), Mogul (RFC0917: Internet subnets, 1984, ACM, pages 1-17), Miller (U.S. Patent No. 5,506,984) and Stancil (U.S. Patent No. 6,272,584). Of the Claims, Claims 1, 11 and 21 are independent. Claims have been amended to clarify the Applicant's invention. The application as amended and argued herein, is believed to overcome the rejections.

Regarding Rejections under 35 U.S.C. § 103(a)

Claims 1-2, 4-12, 14-17, 19-22, 24-27, 29-30 and 32 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bergsten (U.S. Patent No. 6,360, 306) in view of DuLac (U.S. Patent No. 5, 550,986 and Kern et al. (U.S. Patent No. 5,870,537), and further in view of Wilson (U.S. Patent No. 6,718,347).

Claims 3, 13, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergsten in view of Dulac, Kern and Wilson and further in view of Mogul (RFC0917: Internet subnets, 1984, ACM, pages 1-17).

Claims 18 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergsten in view of DuLac, Kern and Wilson, and further in view of Miller (U.S. Patent No. 5,506,984).

Claim 31 is rejected under 35 U.S.C. §103(a) as being unpatentable over Bergsten in view of DuLac, Kern, and Wilson and further in view of Stancil (U.S. Patent No. 6,272,584).

Turning to the cited art, Bergsten discusses a method for storing multiple backup copies of data in geographically separate locations. The system discussed by Bergsten includes a plurality of storage controllers coupled via a communications link. Each of the plurality of storage controllers is coupled to a local host and a local storage array. The storage controllers co-operate to allow any of the hosts to access data stored in any of the locally coupled storage arrays. (*See* Bergsten Fig. 1, storage controllers (3-1, .., 3-M),

communications link (9), host (2-1, .., 2-M), storage array (4-1,...,4-M); col. 3, lines 36-63.)

Cited reference DuLac discusses a RAID array that includes an array of storage nodes with each storage node including a data storage device and a processor.

Cited reference Kern discusses a disaster recovery system that provides remote data shadowing by storing a mirror image (logical or physical) of the primary device on a secondary device. Upon detecting a failure in the primary data storage device, all access is swapped (switched) to the secondary data storage device. (*See* Kern col. 9, lines 14-31 and col. 12, lines 1 -28 and Figs 1 and 5.)

Cited reference Wilson discusses a system for maintaining coherence among copies of a database shared by multiple computers with data stored in storage subsystems. (*See* Wilson Fig. 3 and Abstract.)

Cited reference Mogul discusses partitioning a host address space by assigning subnet numbers to LANs.

Cited reference Miller is directed to a method for data retrieval in a distributed system. A query entered at a user interface is directed to different databases using linked references by an organization engine until the requested data is retrieved from one of the databases. (*See* Miller col. 14, lines 10-51.)

Cited reference Stancil is directed to a computer system with a non-volatile memory module that is shared by a plurality of system components during initialization.

To establish a prima facie case for obviousness under 35 U.S.C. 103(a), (1) there must be some suggestion or motivation to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the references when combined must teach or suggest all the claim limitations. (*See* MPEP 2143.) For the reasons discussed below, it is respectfully submitted that the Office has not established a prima facie case under 35 U.S.C. 103(a) for claims 1-32 and that therefore, claims 1-32 are allowable.

The Office fails to identify a suggestion or motivation to combine reference teachings

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the

combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990.)" (*See* MPEP 2143.01 III.)

The Office fails to identify a suggestion or motivation in the prior art for combining Bergsten and DuLac. The Office action merely states: "it would have been obvious for one having ordinary skill in the art at the time of the invention to utilize the teaching of DuLac to the system of Bergsten in order to control the storage and retrieval of data at the storage node." This merely states an advantage of combining Bergsten and DuLac that is not the same as showing a motivation to combine the references. There must be actual evidence of a suggestion to modify a prior art reference or to combine two prior art references, and the suggestion to combine or modify the prior art must be clear and particular. (*See* In re Dembiczak, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).)

The Office fails to identify a suggestion or motivation in the prior art for combining Bergsten and Wilson. The Office action merely states: "it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize the teachings of Wilson to the system of Bergsten in order to result in a less expensive implementation of a network system. This merely states an advantage of combining Bergsten, DuLac and Wilson, that is, "a less expensive implementation of a network system".

The Office fails to identify a suggestion or motivation in the prior art for combining Bergsten and Kern. The Office Action merely states "it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Kern to the system of Bergsten in order to complete file requests regardless of system failure". This merely states an advantage of combining Bergsten, DuLac and Kern, that is, "to complete file requests regardless of system failure".

The Office fails to identify a suggestion or motivation in the prior art for combining Bergsten, DuLac, Kern and Wilson. The Office action merely states: "it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize the teachings of Wilson to the system of Bergsten in order to result in a less expensive implementation of a network system". This merely states an advantage of combining Bergsten, DuLac and Wilson, that is, "a less expensive implementation of a network system".

The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992)(emphasis added). The Office action does not identify any evidence in the prior art indicating or in any way suggesting the desirability of the proposed modifications.

The references when combined do not teach or suggest all the claim limitations

Bergsten does not teach or suggest at least:

> "providing at least three intelligent storage nodes directly accessible to said DOSMs over a wide area, public access network coupling the DOSMs to the intelligent storage nodes, said intelligent storage nodes accessible to said DOSMs via public access network addresses associated with the intelligent storage nodes"
>
> as claimed by the Applicant in Claim 1.

In contrast, in the system discussed by Bergsten each storage controller is locally coupled to a respective local storage array. Each of the storage controllers is coupled via a communications link that is separate from the local link that couples each storage array to its respective storage controller. Communication between storage controllers is provided over the communication link to allow any of the storage controllers to indirectly access data stored in any of the locally coupled storage arrays via the respective storage controller. (*See* Bergsten, Fig. 1 storage controller (3-1), storage array (4-1), communication link 9, 8; Col. 3, lines 36-53.)

Furthermore, Bergsten does not teach or suggest at least:

"in the event of a failure of said first intelligent storage node resulting in a failover condition rendering said first intelligent storage node unavailable, upon receiving a request for said file by a DOSM, identifying by said DOSM that said second intelligent storage node stores said duplicate of said file, redirecting said file request, via said network, to said second intelligent storage node and indicating a location determined at said DOSM for said file in said second intelligent storage node"

as claimed by the Applicant in Claim 1.

Bergsten does not even teach or suggest the Applicant's disclosed "intelligent storage node" that includes "a processor core and a plurality of storage devices". Bergsten merely discusses failure of a communication medium, host computer, storage device in a storage array or a storage controller. There is no teaching or suggestion of "failure of said first intelligent storage node" or of "redirecting said file request, via said network, to said second intelligent storage node".

The additional references Kern, DuLac, Wilson, Mogul, Miller and Stancil fail to cure the deficiencies of Bergsten noted above. The additional references fail to disclose or suggest at least "each intelligent storage node including a processor core and a plurality of storage devices".

DuLac does not teach or suggest at least:

"each intelligent storage node including a processor core and a plurality of storage devices"

as claimed by the Applicant in Claim 1.

In contrast, the "intelligent storage node" discussed by DuLac merely refers to an "intelligent disk drive" that includes a storage device such as a magnetic disk drive unit and a processor for storage media control such as head positioning, data encoding/decoding and defect handling. DuLac refers to a Small Computer System Interface (SCSI) disk drive as being a typical example of an "intelligent disk drive". (*See* DuLac col. 3, lines 54-60, Fig. 2; col. 4, lines 12-17.) As shown in Fig. 2 of DuLac, the node includes one processor (P) for controlling one storage element (D) and also includes buffers for volatile data storage. The buffers discussed by DuLac do not teach or suggest the Applicant's disclosed "plurality of storage devices". In contrast, in an embodiment of the Applicant's claimed invention, an intelligent storage node includes a core processor coupled to a plurality of storage devices, and each of the storage devices may be a SCSI disk drive. (*See*, for example, Page 25, lines 5-10; Fig. 7 in the Applicant's application as originally filed.)

Furthermore, the additional references Kern, DuLac, Wilson, Mogul, Miller and Stancil fail to disclose or suggest at least "intelligent storage nodes accessible to said DOSMs over a wide area, public access network coupling the DOSMs to the intelligent storage nodes, said intelligent storage nodes accessible to said DOSMs via public access network addresses associated with the intelligent storage nodes, each intelligent storage node including a processor core and a plurality of storage devices" and so fail to disclose the invention as recited in claim 1.

Thus, the references when combined do not teach or suggest all the claim limitations.

Claims 1-10 are dependent claims that depend directly or indirectly on claim 1, which has been shown to be non-obvious over the cited art. Independent claims 11 and 21 recite a like distinction and are thus non-obvious over the cited art. Claims 12-20 and 31-32 depend directly or indirectly on claim 11 and claims 22-30 depend directly or indirectly on claim 21 and are thus non-obvious over the cited references.

Therefore, separately or in combination, Bergsten, DuLac, Kern, Wilson, Mogul and Miller do not teach or suggest the Applicant's claimed invention.

The Office has failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 because (1) the Office has failed to provide some suggestion or motivation to combine reference teachings because it failed to identify any evidence in the prior art indicating or in any way suggesting the desirability of the proposed modification, and (2) the references when combined do not teach or suggest all the claim limitations.

Accordingly, the present invention as now claimed is not believed to be made obvious from the cited references. Removal of the rejections under 35 U.S.C. § 103(a) and acceptance of claims 1-32 is respectfully requested.

CONCLUSION

Applicant is herewith submitting an IDS. It is respectfully requested that the Examiner consider and make of record in the subject application the information cited in this IDS.

In view of the foregoing, it is submitted that all claims (claims 1-32) are in condition of allowance. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to Deposit Account Number 02-2666.

Respectfully submitted,

Caroline M. Fleming
Registration. No. 45,566
Telephone No. (978) 553-7371

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